AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-42 (cancelled).

43 (new). A catalyst composition for the oxidation of ethane, and optionally ethylene, to acetic acid and ethylene, which catalyst composition comprises (i) a support, and (ii), in combination with oxygen, the elements molybdenum, vanadium and niobium, optionally tungsten and a component Z, which is one or more metals of Group 14 of the Periodic Table of Elements; wherein a, b, c, d and e represent the gram atom ratios of the elements Mo, W, Z, V and Nb respectively, such that:

$0 < a \leq 1$; $0 \leq b < 1$ and $a + b = 1$;

$0.05 < c \leq 2$;

$0 < d \leq 2$; and

$0 < e \leq 1$.

44 (new). A catalyst composition according to claim 43 wherein $0.01 < a \leq 1$, $0.1 \leq c \leq 2$, $0.1 \leq d \leq 2$, $0.01 < e \leq 1$.

45 (new). A catalyst composition according to claim 44 wherein $0.1 \leq d \leq 0.5$.

46 (new). A catalyst composition according to claim 44 or claim 45 wherein $0.01 \leq e \leq 0.6$.

47 (new). A catalyst composition according to claim 43 wherein Z is Sn.

48 (new). A catalyst composition according to claim 43 wherein the catalyst composition comprises a further component, Y, which is one or more elements selected from the group consisting of: Cr, Mn, Ta, B, A1, Ga, In, Pt, Zn, Cd, Bi, Ce, Co, Rh, Ir, Cu, Ag, Fe, Ru, Os, K, Rb, Cs, Mg, Ca, Sr, Ba, Ni, P, Sb, Si, T1, U, Re, Te, La, Au, Ti, Hf, Zr and Pd.

49 (new). A catalyst composition according to claim 48 wherein Y is selected from the group consisting of Bi, Ca, Ce, Cu, K, P, Sb, La, Hf, Zr, Ti and Te.

50 (new). A catalyst composition according to claim 49 wherein Y is selected from Hf, Ti, and Zr.

51 (new). A catalyst composition according to claim 50 wherein Y is Ti.

52 (new). A catalyst composition according to claim 43 which comprises Sn and further comprises, as component Y, Ti.

53 (new). A catalyst composition according to claim 49 wherein Y is present at a gram atom ratio, f, wherein $0 \leq f \leq 2$.

54 (new). A catalyst composition according to claim 52 wherein $0.01 \leq f \leq 0.5$.

54 (new). A catalyst composition according to claim 52 wherein $0.01 \leq f \leq 0.5$.

55 (new). A catalyst composition according to claim 43 or claim 48 which catalyst composition is substantially devoid of gold and/or palladium.

56 (new). A catalyst composition according to claim 43 wherein the support comprises at least one metal oxide support.

57 (new). A catalyst composition according to claim 56 wherein the metal oxide support is selected from silica, titania, titanosilicates, alumina, aluminosilicates, zirconia and mixtures thereof.

58 (new). A catalyst composition according to claim 57 wherein the metal oxide support is selected from silica, titania and a mixture of silica and titania.

59 (new). A catalyst composition according to claim 43 wherein the support is a non-oxide support.

60 (new). A catalyst composition according to claim 43 in which the support comprises from about 20 wt% to 90 wt% of the total weight of the catalyst composition.

61 (new). A catalyst composition according to claim 60 wherein the support comprises from 40 wt% to 60 wt% of the total weight of the catalyst composition.

62 (new). A catalyst composition according to claim 43 or claim 48 in which at least one of aluminium, titanium and zirconium is present in the composition as a component of the support and/or as component Y.

63 (new). A process for the preparation of a catalyst composition according to claim 43 which process comprises the steps of:

(a) forming a mixture comprising molybdenum, vanadium, niobium, a support material or a precursor thereof, component Z, and optionally tungsten in a solution;

(b) drying the mixture to form a dried solid material; and

(c) calcining the dried solid material to form the catalyst composition.

64 (new). A process according to claim 61 in which step (a) further comprises a component Y as defined in any one of claims 48 to 51.

65 (new). A process according to claim 63 wherein the mixture is formed as a solution in water.

66 (new). A process according to claim 65 wherein the solution has a pH of 2 to 8.

67 (new). A process according to claims 63 to 66 wherein in step (a) the support material or precursor thereof is added to a pre-formed mixture of molybdenum, vanadium, niobium, component Z, optional tungsten and optional component Y.

68 (new). A process according to claim 63 wherein the drying process of step (b) is a spray-drying process.

69 (new). A process according to claim 63 wherein the calcining is carried out by heating the dried solid material to a temperature of 200 to 550° C in air or oxygen for 1 minute to 24 hours.

70 (new). A process for the production of acetic acid and ethylene from a gaseous mixture comprising ethane, and optionally ethylene, which process comprises contacting in a reaction zone the gaseous mixture with a molecular oxygen-containing gas at elevated temperature in the presence of a catalyst composition as claimed in claims 43 to 62 or as prepared by claims 63 to 69.

71 (new). A process according to claim 70 wherein the gaseous mixture comprises ethane and ethylene.

72 (new). A process according to claim 70 or claim 71 in which water is also present as a feed component.

73 (new). A process according to claim 70 or claim 71 wherein acetic acid and ethylene are produced in a ratio in the range 0.8 :1 to 1.2 : 1.

74 (new). A process according to claim 73 wherein the ratio of acetic acid to ethylene is in the range 0.9 : 1 to 1.1 : 1.

75 (new). A process according to claim 70 wherein the elevated temperature is in the range 200 to 500°C.

76 (new). A process according to claim 70 wherein the process is carried out at a pressure in the range of 1 to 50 bar.

77 (new). A process according to claim 70 wherein the catalyst is used in the form of a fixed bed or a fluidised bed.

78 (new). A process according to claim 70 wherein the overall selectivity to acetic acid and ethylene is at least 70 mol%.

79 (new). A process according to claim 78 wherein the overall selectivity is at least 75 mol%.

80 (new). A process as claimed in claim 70 in which at least a portion of the acetic acid and at least a portion of the ethylene is contacted in a second reaction zone with a molecular oxygen-containing gas at elevated temperature in the presence of a catalyst suitable for the production of vinyl acetate to produce vinyl acetate.

81 (new). A process as claimed in claim 70 in which acetic acid and ethylene are produced in a ratio in the range 0.8 :1 to 1.2 : 1 and which are contacted in a second reaction zone with a molecular oxygen-containing gas at elevated temperature in the presence of a catalyst suitable for the production of vinyl acetate to produce vinyl acetate.

82 (new). A process according to claim 80 or claim 81 wherein the second reaction zone is a fluidised bed reactor.

83 (new). A process as claimed in claim 70 in which at least a portion of the acetic acid and at least a portion of the ethylene is contacted in a second reaction zone with a molecular oxygen-containing gas at elevated temperature in the presence of a catalyst suitable for the production of ethyl acetate to produce ethyl acetate.

84 (new). A process as claimed in claim 70 in which acetic acid and ethylene are produced in a ratio in the range 0.8 :1 to 1.2 : 1 and which are contacted in a second reaction zone with a molecular oxygen-containing gas at elevated temperature in the presence of a catalyst suitable for the production of ethyl acetate to produce ethyl acetate.